10 Rec'd PCT/PTO 17 MAR 2005

PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:
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PCT

WRITTEN OPINION

(PCT Rule 66)

Date of Mailing (*day/month/year*)	21 JUL 2004
Applicant's or agent's file reference 944-4.14-1	REPLY DUE within 2 months/days from the above date of mailing

International application No.	International filing date (*day/month/year*)	Priority date (*day/month/year*)
PCT/IB03/04000	17 September 2003 (17.09.2003)	27 September 2002 (27.09.2002)

International Patent Classification (IPC) or both national classification and IPC

IPC(7): G06K 7/08, 5/00, 7/06; G06F 17/00, 7/00; G05B 19/00 and US Cl.: 235/451

Applicant

NOKIA CORPORATION

1. This written opinion is the first (first, etc,) drawn by this International Preliminary Examining Authority.

2. This opinion contains indications relating to the following items:

- I ☒ Basis of the opinion
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Rule 66.2 (a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

3. The applicant is hereby invited to reply to this opinion.

When? See the time limit indicated above. ~~The applicant may, before the expiration of that time limit, request this Authority to grant an extension. See rule 66.2(d).~~

How? By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.

Also For an additional opportunity to submit amendments, see Rule 66.4.
For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4 *bis*.
For an informal communication with the examiner, see Rule 66.6

If no reply is filed, the international preliminary examination report will be established on the basis of this opinion.

4. The final date by which the international preliminary examination report must be established according to Rule 69.2 is: 27 January 2005 (27.01.2005)

Name and mailing address of the IPEA/US
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WRITTEN OPINION

International Application No.
PCT/IB03/04000

I. Basis of the opinion

1. With regard to the elements of the international application:*

☒ the international application as originally filed

☒ the description:
pages 1-20, as originally filed
pages NONE, filed with the demand
pages NONE, filed with the letter of _____.

☒ the claims:
pages 21-24, as originally filed
pages NONE, as amended (together with any statement) under Article 19
pages NONE, filed with the demand
pages NONE, filed with the letter of _____.

☒ the drawings:
pages 1-3, as originally filed
pages NONE, filed with the demand
pages NONE, filed with the letter of _____.

☐ the sequence listing part of the description:
pages NONE, as originally filed
pages NONE, filed with the demand
pages NONE, filed with the letter of _____.

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.
These elements were available or furnished to this Authority in the following language English which is:

☐ the language of a translation furnished for the purposes of international search (under Rule23.1(b)).

☐ the language of publication of the international application (under Rule 48.3(b)).

☐ the language of the translation furnished for the purposes of international preliminary examination(under Rules 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the written opinion was drawn on the basis of the sequence listing:

☐ contained in the international application in printed form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☒ The amendments have resulted in the cancellation of:

☒ the description, pages NONE

☒ the claims, Nos. NONE

☒ the drawings, sheets/~~fig~~ NONE

5. ☐ This opinion has been drawn as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

** Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed."*

WRITTEN OPINION

International application No.
PCT/IB03/04000

V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. STATEMENT

Novelty (N)	Claims	4, 5, 11	YES
	Claims	1-3, 6-10, 12-14	NO
Inventive Step (IS)	Claims	4, 5, 11	YES
	Claims	1-3, 6-10, 12-14	NO
Industrial Applicability (IA)	Claims	1-14	YES
	Claims	NONE	NO

2. CITATIONS AND EXPLANATIONS

Please See Continuation Sheet

Supplemental Box
(To be used when the space in any of the preceding boxes is not sufficient)

TIME LIMIT:
The time limit set for response to a Written Opinion may not be extended. 37 CFR 1.484(d). Any response received after the expiration of the time limit set in the Written Opinion will not be considered in preparing the International Preliminary Examination Report.

V. 2. Citations and Explanations:

Claims 1-3, 6-10, and 12-14 lack novelty under PCT Article 33(2) as being anticipated by Saitoh (US 5,929,414).

Re claim 1, Saitoh discloses a wireless terminal (71) having a terminal interface (64) characterized in that the wireless terminal (71) includes a smart card application host (IC card 50 or main controller 61) and also a smart card router (61), the smart card router (61) responsive to radio frequency (RF) communication signal (65a is a modem which provides modulating and demodulating functions) issuing from contactless smart card reader (65), for demodulating the RF communication signal (col. 2, ll. 3-18)) and providing either a demodulated communication traffic signal routed to the smart card application host (34) or a demodulated communication traffic signal routed to the terminal interface (32), the routing determined based on information conveyed by the RF communication signal (RF in air). The main controller performs the functions of selecting the types of IC card (contact/contactless) and hosts and processes the selected type of IC card. Since the claimed smart card router may be interpreted as a switch selecting a type of IC card, the main controller of Saitoh reads on the claimed limitation.

Re claim 2, Saitoh discloses the wireless terminal as recited in rejected claim 1 stated above, wherein the smart card application host (IC card 50 or main controller 61) is selected from the group consisting of a contact smart card (contact/contactless IC card 50 in Fig. 1), a microcontroller (main controller 61) residing in the wireless terminal (71), and a security component of the wireless terminal.

Re claim 3, Saitoh discloses the wireless terminal as recited in rejected claim 1 stated above, further characterized in that the smart card router (61) is also responsive to unmodulated communication traffic (demodulated signal) provided by the smart card application host (IC card 50 or main controller 61) and is responsive to unmodulated communication traffic provided by the terminal interface (transceiver 65b), and in response to either provides modulated communication traffic signal (via modem 65a) for transmission the contactless smart card reader (65).

Re claim 6, Saitoh discloses the wireless terminal as recited in rejected claim 1 stated above, further characterized in that starting communications with the contactless smart card reader (65), the wireless terminal (71) reports RF parameter messages in a format understandable to (modulated signal) the contactless smart card reader so as to enable the communications.

Re claim 7, Saitoh discloses the wireless terminal as recited in rejected claim 6 stated above, wherein the RF parameters so reported indicate proprietary capabilities of the smart card application host (IC card 50 or main controller 61). The RF parameters are a modulated signal with a predetermined reading range. The parameters inherently are unique to each non-contact IC card and its applications. Hence, the parameters disclose proprietary capabilities of the smart card applications.

Re claim 8, Saitoh discloses the wireless terminal as recited in rejected claim 6 stated above, wherein the RF parameters are derived from data provided by an answer-to-reset message issued by the smart card application host (IC card 50 or main controller 61; col. 8, ll. 37-40).

Re claim 9, Saitoh discloses a method for use by a wireless terminal (71) in communicating with a contactless smart card reader (65), the wireless terminal including a smart card application host (IC card 50 or main controller 61) hosting at least one smart card

Supplemental Box
(To be used when the space in any of the preceding boxes is not sufficient)

application, the method characterized by: a step (S1) of receiving from the contactless smart card reader a radio frequency (RF) communication signal pertinent to the at least one smart card application; a step (S7) of examining the received communication signal to determine where to route including possibly routing the communication signal to the at least one smart card application or to a terminal interface (65b) of the wireless terminal or to an antenna (33c) for radiative transmission to a system (IC card 50 processing system) related to the at least one smart card application; and a step (S28) of routing the communication signal the destination so determined.

Re claim 10, Saitoh discloses the method as recited in rejected claim 9 stated above, wherein the smart card application host (IC card 50 or main controller 61) is selected from the group consisting of a contact smart card (IC card 50), a microcontroller (main controller 61) residing in the wireless terminal (71), and a security component of the wireless terminal.

Re claim 12, Saitoh discloses the method as recited in rejected claim 9 stated above, further characterized in that starting communications with the contactless smart card reader (65), the wireless terminal (71) reports RF parameter messages in a format understandable (modulated signal) to the contactless smart card reader so as to enable the communications.

Re claim 13, Saitoh discloses the method as recited in rejected claim 12 stated above, wherein the RF parameter so reported indicate proprietary capabilities of the smart card application host (IC card 50 or main controller 61). The RF parameters are a modulated signal with a predetermined reading range. The parameters inherently are unique to each non-contact IC card and its applications. Hence, the parameters disclose proprietary capabilities of the smart card applications.

Re claim 14, Saitoh discloses the wireless terminal as recited in rejected claim 12 stated above, wherein the RF parameters are derived from data provided by an answer-to-reset message issued by the smart card application host (IC card 50 or main controller 61; col. 8, ll. 37-40).

Claims 4, 5, and 11 meet the criteria set out in PCT Article 33(2)-(3), because the prior art does not teach or fairly suggest the claimed wireless terminal comprising, among other things, a card access module and router, a modulator/demodulator, an RF antenna, and a card reader chip in which the card access module and router is coupled to the smart card application host via the card reader chip and is coupled to the terminal interface and is also coupled to the RF antenna via the modulator/demodulator, the RF antenna in turn being radiatively coupled to a ticketing system. Accordingly, one of ordinary skill in the art would not have been motivated to modify teachings of prior art to meet the claimed limitations as set forth in the present claimed invention.

Claims 1-14 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.